

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

IN RE APPLICATION OF:

Carl E. Whitcomb

SERIAL NO: 10/770,352

CONFIRMATION NO.: 7661

FILED: February 2, 2004

FOR: Plant Container and Sidewall  
Providing Improved Management  
of Irrigation and Aeration

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§ EXAMINER: Nguyen, Son T.

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§ GROUP ART UNIT: 2835

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**APPEAL BRIEF**

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## **APPEAL BRIEF**

Appellant timely filed a Notice of Appeal on December 11, 2009 appealing the decision of the Examiner in the Final Office Action dated October 7, 2009 for Application No. 10/770,352. Appellant submits this Appeal Brief pursuant to 37 C.F.R. 41.37.

### **(1) REAL PARTY IN INTEREST**

The real party in interest is Lacebark, Inc., the recorded assignee of the entire right, title and interest in and to Application No. 10/770,352. Lacebark, Inc. is a corporation of the State of Oklahoma, having a place of business at Stillwater, Oklahoma 74705.

### **(2) RELATED APPEALS AND INTERFERENCES**

The present Application No. 10/770,352 was previously appealed as Appeal 2008-2136, decided on June 13, 2008. A copy of the Decision on Appeal, in which the Board affirmed in part, reversed in part, and asserted a new ground of rejection, is provided in the Related Proceedings Appendix. Pending Application No. 10/075,096, which is incorporated by reference into Application No. 10/770,352, is awaiting a Decision in Appeal No. 2009-011554.

### **(3) STATUS OF THE CLAIMS**

Claims 1-3, 5-54, and 63-74 are pending in this application. Claims 41-45 and 51-54 are withdrawn from consideration. Claims 4 and 55-62 are cancelled. Claims 1-3, 5-40, 46-50, and 63-74 stand rejected. All of the rejected claims are under appeal.

### **(4) STATUS OF AMENDMENTS**

Appellant proposed no amendment in response to the Final Office Action on which this appeal is filed. There are no outstanding amendments that have not been entered by the Examiner.

## (5) SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent claims 1, 65, and 70 are involved in this appeal. Some support for the claimed subject matter is provided with reference to the specification and the drawings, to guide the Board in its understanding of the claimed subject matter. However, support for the claims is provided throughout the specification, and interpretation of the claims is not to be limited to the selected support referred to in this Summary.

Claim 1 recites a sidewall for a plant container. (See, *e.g.*, ¶¶ 21, 22, 24 for a general discussion of a sidewall and some examples of a sidewall's construction and use in plant containers according to one or more embodiments of the invention; *see also* sidewall **17** in FIGS. **1-4** and **6-9**.) The sidewall includes a substantially water-impermeable root-tip-trapping region and a porous air-root-pruning region adjacent the root-tip-trapping region. (See Background ¶¶ 3 – 7 for a general discussion of the benefits of root-tip trapping and air-root pruning, such as preventing spiral root growth and maximizing the development of lateral roots; *see also* ¶¶ 21, 23, 27 – 29 for discussion of root-tip-trapping and air-root-pruning regions of example embodiments; and see root-tip-trapping region **13** and air root-pruning region **20**, and discussion thereof, in the example embodiments of FIGS. **1, 2, 7, 8, and 9**.) The root-tip-trapping region is a contiguous upper portion of the sidewall, and the air-root-pruning region is a contiguous lower portion of the sidewall. See original claims 4 and 42, along with ¶¶ 8 and 11 and Abstract, as amended in the Response to the Office Action Dated March 17, 2009.

Claim 65 recites a sidewall for a plant container. (See, *e.g.*, ¶¶ 21, 22, 24 for a general discussion of a sidewall and some examples of a sidewall's construction and use in plant containers according to one or more embodiments of the invention; *see also* sidewall **17** in FIGS. **1-4** and **6-9**.) The sidewall includes a substantially water-impermeable root-tip-trapping region and a porous air-root-pruning region adjacent the root-tip-trapping region. (See Background ¶¶ 3 – 7 for a general discussion of the benefits of root-tip trapping and air-root pruning, such as preventing spiral root growth and maximizing the development of lateral roots; *see also* ¶¶ 21, 23, 27 – 29 for discussion of root-tip-trapping and air-root-pruning regions of example

embodiments; and see root-tip-trapping region **13** and air root-pruning region **20**, and discussion thereof, in the example embodiments of FIGS. **1**, **2**, **7**, **8**, and **9**.) The root-tip-trapping region comprises between 1/2 and 9/10 of the sidewall. (See ¶ 21 and Abstract)

Claim 70 recites a sidewall for a plant container. (See, *e.g.*, ¶¶ 21, 22, 24 for a general discussion of a sidewall and some examples of a sidewall's construction and use in plant containers according to one or more embodiments of the invention; *see also* sidewall **17** in FIGS. **1-4** and **6-9**.) The sidewall includes a substantially water-impermeable root-tip-trapping region and a porous air-root-pruning region adjacent the root-tip-trapping region. (See Background ¶¶ 3 – 7 for a general discussion of the benefits of root-tip trapping and air-root pruning, such as preventing spiral root growth and maximizing the development of lateral roots; *see also* ¶¶ 21, 23, 27 – 29 for discussion of root-tip-trapping and air-root-pruning regions of example embodiments; and see root-tip-trapping region **13** and air root-pruning region **20**, and discussion thereof, in the example embodiments of FIGS. **1**, **2**, **7**, **8**, and **9**.) The root-tip-trapping and air-root-pruning regions form a bendable sheet. (See ¶ 23, incorporating by reference the subject matter of U.S. Patent No. 4,939,865 and U.S. Patent Application No. 10/446,987 filed by the present inventor on May 27, 2003.)

**(6) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

- a. Whether claims 1, 2, 7, and 37 are patentable under 35 U.S.C. 102(a) over U.S. Patent No. 6,202,348 (“Reiger”).
- b. Whether claims 3, 12, 14-20, 26, 27, 32, 33, 46-50, 63, 64, 67, and 68 are patentable under 35 U.S.C. 103(a) over Reiger in view of U.S. Patent No. 3,080,680 (“Reynolds”).
- c. Whether claims 5, 6, 13, 65, 66, and 69 are patentable under 35 U.S.C. 103(a) over Reiger under 35 U.S.C. 103(a).
- d. Whether claims 8, 9, 11, 36, 38-40, 70-72 are patentable under 35 U.S.C. 103(a) over Reiger in view of U.S. Patent No. 4,939,865 (“Whitcomb I”).
- e. Whether claim 7 is patentable under 35 U.S.C. 103(a) over Reiger in view of U.S. Patent No. 4,716,680 (“Whitcomb II”).
- f. Whether claim 21 is patentable under 35 U.S.C. 103(a) over Reiger and Reynolds in view of U.S. Patent No. 5,311,700 (“Thomas”).
- g. Whether claims 22-24 are patentable over Reiger and Reynolds in view of GB 2,073,567 (“Berlit”).
- h. Whether claims 25, 29, and 31 are patentable under 35 U.S.C. 103(a) over Reiger and Reynolds in view of EP 300578A3 (“Van der Goorbergh”).
- i. Whether claims 28, 34, and 35 are patentable under 35 U.S.C. 103(a) over Reiger and Reynolds in view of U.S. Patent No. 5,852,896 (“Flasch”).
- j. Whether claim 30 is patentable under 35 U.S.C. 103(a) over Reiger, Reynolds, and Berlit in view of Flasch.
- k. Whether claims 73-74 are patentable under 35 U.S.C. 103(a) over Reiger and Whitcomb I in view of Reynolds.

## (7) ARGUMENT

- a. **Claims 1, 2, 7, and 37 are patentable under 35 U.S.C. 102(a) over U.S. Patent No. 6,202,348 (“Reiger”).**

### (1) Applicable Law

Anticipation requires that every claim element and limitation is set forth in a single prior art reference, in the same form and order as in the claim. *Abbot Labs v. Sandoz, Inc.*, 544 F.3d 1341, 1345; *see In re Omeprazole Patent Litigation*, 483 F.3d 1364, 1373 (Fed.Cir.2007); *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1267 (Fed.Cir.1991). An anticipating reference must enable that which it is asserted to anticipate. *Abbot Labs*, 544 F.3d at 1345; *Omeprazole*, 483 F.3d at 1378 (“To ‘anticipate,’ the identical subject matter must not only be previously known, but the knowledge must be sufficiently enabling to place the information in the possession of the public.”). During patent examination, the pending claims must be given their broadest reasonable interpretation consistent with the specification. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005); *see also* MPEP 2111.

The Court of Appeals for the Federal Circuit has recently reaffirmed that examiners must interpret claim terms in a manner that is consistent with the specification. The case of *In re American Academy of Science Tech. Center* is cited in the Manual of Patent Examining Procedure, Section 211.01 entitled “Plain Meaning.” According to this Federal Circuit opinion, “[d]uring examination, ‘claims . . . are to be given their broadest reasonable interpretation consistent with the specification, and . . . claim language should be read in light of the specification as it would be interpreted by one or ordinary skill in the art.’” *In re American Academy of Science Tech Center*, 367 F.3d 1359 (Fed. Cir. 2004).

The specification should also be relied on for more than just explicit lexicography or clear disavowal of claim scope to determine the meaning of a claim term when an applicant acts as his or her own lexicographer; the meaning of a particular claim term may be defined by implication, that is, according to the usage of the term in context in the specification. *See Phillips v. AWH Corp.*, 363 F.3d 1207, 75 USPQ2d 1321 (Fed. Cir. 2005)(*en banc*); *Vitronics Corp. v. Conceptronic Inc.*, 90 f.3d 1576, 1583 USPQ2d 1573, 1577 (Fed. Cir. 1996); and *See MPEP § 2111.01*, Subsection III.

Claims in dependent form shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim. 35 U.S.C. § 112, 4th paragraph; *See MPEP 608.01(n)*. Where the patentability of dependent claims is not argued separately from the independent claims from which they depend, the former stand or fall with the latter. *Scanner Technologies v. ICOS Vision Sys. Corp.*, 528 F.3d 1365, 1383 (Fed. Cir. 2008); *See In re Trans Texas Holdings Corp.*, 498 F.3d 1290, 1293 (Fed. Cir. 2007).

(2) Rejection of Claims 1, 2, 7, and 37

Claims 1, 2, 7, and 37 stand rejected under 35 U.S.C. 102(a) as being anticipated by Reiger.

Claim 1

Claim 1, which has since been amended, originally recited:

A sidewall for a plant container, comprising:  
a substantially water-impermeable root-tip-trapping region; and  
a porous air-root-pruning region adjacent the root-tip-trapping region.

The Board previously determined that this original version of claim 1 was anticipated by Reiger. See the Board's Decision of June 13, 2008 ("BPAI Decision"). In the BPAI Decision, the Board supplied the following rationale in support of a finding that Reiger teaches a porous air-root-pruning region:

Reiger's plastic sidewall 142 also includes a plurality of drain holes 146 (Fig. 8; col. 7, ll. 52-54). Because the fabric liner 120 adjacent these drain holes is exposed to air, we determine that this adjacent fabric liner inherently performs the air-root-pruning function recited in claim 1. *See In re Cruciferous Spout Litig.*, 301 F.3d 1343, 1349 (Fed. Cir. 2002)(A prior art reference may anticipate when the claim limitations not expressly found in the reference are nonetheless inherent in it).

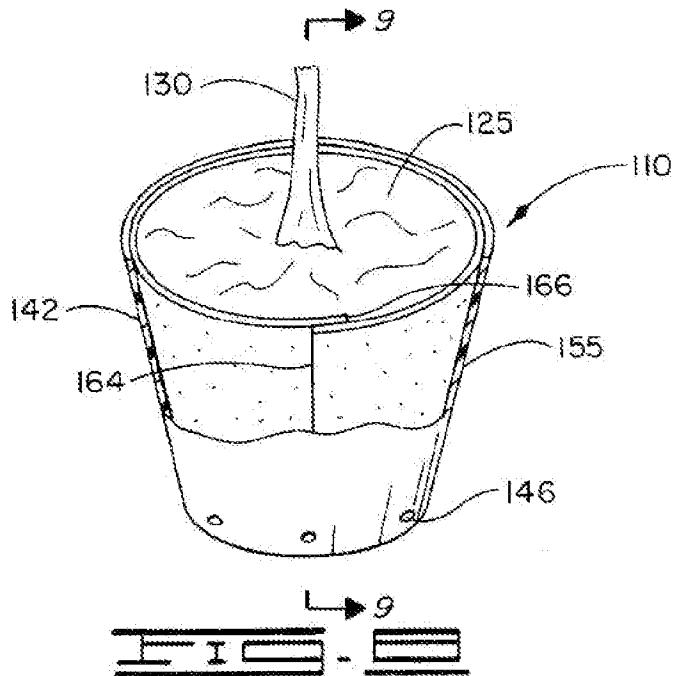
Our determination is reasonable since Reiger expressly teaches that root tips are capable of penetrating the fabric liner and thereupon stop growing when directed into the sidewall 142 of pot 115 (col. 8, ll. 38-48). Because no sidewall 142 exists at the regions defined by drain holes 146, the afore-noted roots which penetrate the fabric liner in those drain hole regions would be necessarily exposed

to air and pruned thereby in the same way as roots are air pruned in Appellant's claimed air-root-pruning region. *See Ex parte Levy*, 17 USPQ2d 1461, 1463-64 (BPAI 1990)(inherency must be reasonably supported by a basis in fact and/or technical reasoning).

Under these circumstances, Reiger's fabric liner regions adjacent drain holes 146 satisfy the claim 1 requirement for "a porous air-root-pruning region adjacent the root-tip-trapping region."

See BPAI Decision, pages 8-9 (underlining added).

FIG. 8 of Reiger is reproduced here for reference:



**Reiger, FIG. 8**

The Board's statement that air-root-pruning would occur in the fabric liner adjacent the drain holes 146 must be understood in the context of the Board's full statement that, "[b]ecause no sidewall 142 exists at the regions defined by drain holes 146, the afore-noted roots which penetrate the fabric liner in those drain hole regions would be necessarily exposed to air and pruned thereby . . ." (BPAI Decision, page 8, lines 22-25). Under the Board's finding only the fabric adjacent the regions defined by the widely spaced drain holes taught by Reiger would properly be interpreted as providing air-root-pruning. Accordingly, the portion of the sidewall

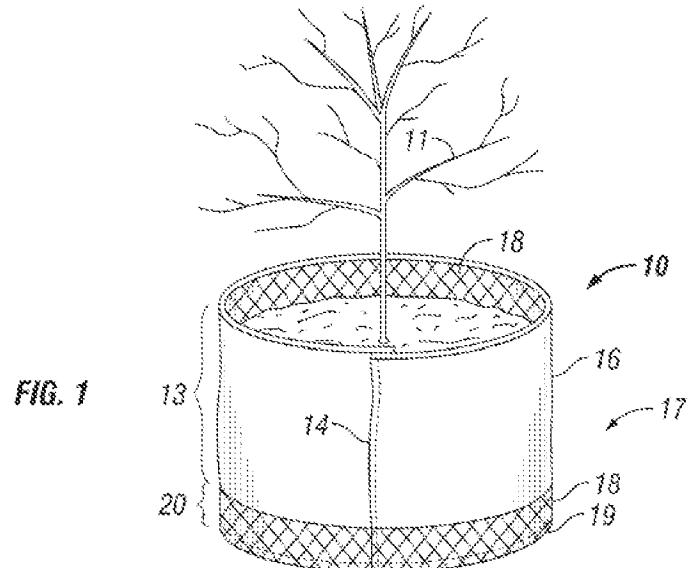
between the widely-spaced drain holes would not function as air-root pruning regions under the Board's holding.

To clarify the claimed invention, claim 1 was amended in response to the BPAI Decision to include the limitation of claim 4, “wherein the root-tip-trapping region *is* a contiguous upper portion of the sidewall and the air-root-pruning region *is* a contiguous lower portion of the sidewall” (italics added). Thus, claim 1 now recites:

A sidewall for a plant container, comprising:  
a substantially water-impermeable root-tip-trapping region; and  
a porous air-root-pruning region adjacent the root-tip-trapping region, wherein the root-tip-trapping region is a contiguous upper portion of the sidewall and the air-root-pruning region is a contiguous lower portion of the sidewall.

See Appellant's Response to the BPAI Decision, filed on Sept. 5, 2008. Paragraph 8 of the specification was subsequently amended in Appellant's Response to the Office Action Dated March 7, 2009, to replace the term “continuous” with the term “contiguous.” This amendment to the specification was supported by the originally filed claims, and the amended paragraphs were accepted without formal objection by the examiner.

One example of an air-root-pruning region that is a contiguous lower portion of the sidewall is shown as region 20 in FIG. 1 as originally filed in the present application:



**Application 10/770,352, FIG. 1**

All or a majority of the roots that contact the air-root-pruning region 20 will be air-root-pruned, no matter where along the air-root-pruning region 20 the roots reach, because the air-root-pruning region 20 is a contiguous lower portion of the sidewall. Thus, the air-root-pruning region 20 will provide the benefits of air-root pruning described in Appellant's specification, such as preventing spiral root growth and maximizing the development of lateral roots.

By contrast, Reiger's widely-spaced drain holes 146 (Reiger, FIG. 8) are, under the Board's previous interpretation, a plurality of discrete, separate, and widely-spaced regions. Thus, the drain holes 146 do not constitute an air-root-pruning region that is a contiguous lower portion of the sidewall as presently recited in claim 1. Any air-root-pruning in the container of Reiger due to drain hole regions is going to be negligible, specifically because the drain holes 146 asserted by the Board (and assumed, *arguendo*, herein) to individually provide air-root-pruning are widely spaced, have a relatively small combined area, and do not constitute a contiguous portion of the sidewall. The vast majority of the roots will grow out and contact the generally curved sidewall of Reiger's plant container between the widely-spaced drain holes 146. As the roots contact the curved sidewall, one skilled in the art would expect the roots to be deflected in a direction tangent to the sidewall, causing most of the roots to grow past (rather than through) the drain holes. Thus, no appreciable air-root pruning will result from the drain holes 146, and the benefit of air-root-pruning, such as preventing spiral root growth and maximizing the development of lateral roots, will be virtually non-existent.

In support of the 102(a) rejection of claim 1, the examiner asserts that Reiger teaches a sidewall for a plant container . . . wherein the root-tip-trapping is a contiguous upper portion of the sidewall. The examiner observes, "there are no breaks or interruption in the sidewall for the air root pruning region, hence, contiguous." See the Office Action dated October 7, 2009, page 2. The examiner's interpretation of the air root pruning region is shown in the annotations to Reiger FIG. 8. See the Office Action dated October 7, 2009, page 3. The examiner concludes that, "[b]ased on 'adjacent or neighboring' definition of contiguous, the region *where the drain holes are located in Reiger* is a contiguous lower portion of the sidewall." See Office Action Dated October 7, 2009, page 19. This conclusion is based on an improper reading of claim 1.

To be clear, claim 1 does not recite that the air-root-pruning region is in (or on) a contiguous lower portion of the sidewall, as read by the examiner. Rather, the air-root-pruning region, *itself*, is required by claim 1 to be a contiguous lower portion of the sidewall. While the difference between the examiner's modified wording and the actual wording of claim 1 may appear similar, at first glance, the meaning is entirely different. The adjective "contiguous" refers to the air-root-pruning region, not merely the sidewall. Thus, while Reiger arguably teaches drain holes *in* a contiguous lower portion of a sidewall (no breaks or interruption in the sidewall) Reiger does not teach an air-root-pruning region that *is* a contiguous lower portion of the sidewall.

For at least these reasons, claim 1 is patentable over Reiger. Dependent claims 2, 7, and 37 are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

**b. Claims 3, 12, 14-20, 26, 27, 32, 33, 46-50, 63, 64, 67, and 68 are patentable under 35 U.S.C. 103(a) over Reiger in view of U.S. Patent No. 3,080,680 ("Reynolds")**

**(1) Applicable Law**

A patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C.A. § 103(a) (2004). The Supreme Court has reiterated the framework (an objective analysis) for applying the statutory language of § 103 originally set out in *Graham v. John Deere Co.*, 383 U.S. 1, 86 S.Ct. 684 (1966). The controlling factors that define the inquiry (the "Graham Factual Inquiries") are:

1. Determining the scope and content of the prior art;
2. Ascertaining the differences between the prior art and the claims at issue; and
3. Resolving the level of ordinary skill in the pertinent art.

*See KSR International v. Teleflex*, 550 U.S. 398, 406, 127 S.Ct. 1727, 1734 (2007). The question of obviousness is determined against this background. *Id.* In all cases, the touchstone of the analysis is whether the "differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *Abbot Labs v. Sandoz, Inc.*, 544 F.3d 1341, 1377 (Fed. Cir. 2008) *See KSR*, 550 U.S. at 406.

The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court has stated that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. *KSR*, 550 U.S. at 418. The Supreme Court has affirmed the Federal Circuit's pronouncement that “rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.” *See In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). *See also KSR*, 550 U.S. at 418 (quoting Federal Circuit statement with approval).

A patent composed of several elements is not proved obvious merely by demonstrating that each element was, independently, known in the prior art. *KSR*, 550 U.S. at 418. Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. *KSR*, 550 U.S. at 418. This is so because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known. *KSR*, 550 U.S. at 418-19.

The ultimate determination of patentability is based on the entire record, by a preponderance of evidence, with due consideration to the persuasiveness of any arguments and any secondary evidence. *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). The legal standard of “a preponderance of evidence” requires the evidence to be more convincing than the evidence which is offered in opposition to it. With regard to rejections under 35 U.S.C. 103, the examiner must provide evidence which as a whole shows that the legal determination sought to be proved (i.e., the reference teachings establish a *prima facie* case of obviousness) is more probable than not. *See MPEP* § 2142.

Claims in dependent form shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim. 35 U.S.C. § 112, 4th paragraph; *See MPEP* 608.01(n). Where the patentability of dependent claims is not argued separately from the

independent claims from which they depend, the former stand or fall with the latter. *Scanner Technologies v. ICOS Vision Sys. Corp.*, 528 F.3d 1365, 1383 (Fed. Cir. 2008); *See In re Trans Texas Holdings Corp.*, 498 F.3d 1290, 1293 (Fed. Cir. 2007).

(2) Rejection of Claims 3, 12, 14-20, 26, 27, 32, 33, 46-50, 64, 67, 68

Claims 3, 12, 14-20, 26, 27, 32, 33, 46-50, 64, 67, 68 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger as applied to claim 1 above, and further in view of Reynolds. Claims 3, 12, 14-20, 26, 27, 32, 33, 46-50, and 64 depend directly or indirectly from independent claim 1. These claims are believed to be patentable for at least the same reasons as claim 1, asserted above. Claims 67 and 68 depend directly or indirectly from independent claim 65, and are believed to be patentable for at least the same reasons as claim 65, as discussed below in Section c(2). Additionally, claim 3 is patentable for the reasons argued under separate subheading below. Accordingly, withdrawal of this rejection is respectfully requested.

Claim 3

Claim 3 recites that the root-tip-trapping region comprises a porous fabric layer bonded to a layer of root-impenetrable material. With regard to one embodiment, the specification teaches, “the root-tip-trapping region is preferably formed by two layers bonded to one another to form a bilayer material. The bilayer material includes a root-tip-trapping layer that prevents the root tips from circling and a layer consisting of a root-impenetrable material formed onto a surface of the root-tip-trapping layer to prevent further advancement of the root tips.” See ¶ 9. The specification discusses that, in an alternative embodiment, it may be possible to stretch-wrap or shrink-wrap a root-impenetrable layer to the fabric layer. However, “since the wrapped outer layer is not bonded to the fabric layer, it is preferable for the wrap to have sufficient strength to minimize the number of roots that would either penetrate the wrap or squeeze between the fabric layer and the wrap layer and begin to circle.” See ¶ 29.

Reiger teaches “placing a fabric liner snugly inside an impermeable pot.” See, e.g., Reiger, col. 9, lines 26-34. The examiner argues that “snugly” fits the definition of bonding. See Office Action dated October 7, 2009. However, the specification clearly distinguishes between

bonding the two layers and merely placing the two layers under tension, in that merely placing the two layers under tension may still allow some root circling between layers. Thus, within the broadest *reasonable* interpretation of Appellant's Specification, Reiger does *not* teach a porous fabric layer *bonded* to a layer of root-impenetrable material.

The examiner asserts, in the alternative, that Reynolds' sidewall includes a root-tip-trapping region comprising a porous fabric layer bonded to a layer of root-impenetrable material. The Board previously found that Reynolds' teaches bonding of two layers generally. See BPAI Decision, page 6 (with reference to original claim 46: A sidewall for a plant container, comprising: a water permeable, porous fabric layer and a water impermeable, root-impenetrable layer bonded to a portion of the outer face of the fabric layer.) However, the Board further found that Reynolds expressly teaches that roots grow into the interface between the sheet and pot and, therefore, that the polymer sheet and fibrous pot sidewall of Reynolds' does not constitute a root-tip-trapping region. See BPAI Decision, page 5. Thus, Reynolds expressly teaches away from the claim 3 limitation of a root-tip-trapping region comprising a porous fabric layer bonded to a layer of root-impenetrable material.

Claim 3 is patentable over Reiger and Reynolds for these reasons, in addition to the reason that claim 3 depends from a patentable claim 1 as argued above. Accordingly, withdrawal of this rejection is respectfully requested.

#### Claims 32 and 33

Claim 32 requires the root-impenetrable layer to have a thickness of between 2 and 10 mils, and claim 33 requires the root-impenetrable layer to have a thickness of between 3 and 5 mils (for reference, 1 mil = 0.001 inch). The examiner concedes "Reiger as modified by Reynolds" is silent about the thickness of the asserted root-impenetrable material. The examiner contends the range of thickness of the root impenetrable material of "Reiger as modified by Reynolds" would be obvious in that "discovering the optimum or workable value/ranges until the desired effect is achieved involves only routine skill in the art" (the examiner fails to cite any authority for this assertion).

The examiner is not clear what "Reiger as modified by Reynolds" means in the context of these assertions – i.e. which elements or limitations of Reynolds is the examiner purporting to modify Reiger with? Furthermore, the examiner has also not explained how or why the

teachings of Reynolds would or could be combined with Reiger. For example, Reynolds discusses a process which permits an enrobing to be pulled closely about the exterior wall of a [fibrous] pot or the use of pressure molding in forming a tightly fitting skin around the pot. See Reiger, Col. 3, lines 7-11. It is unclear how that process would be evident or even possible in combination with the construction of Reiger's fabric-lined pot so as to render such a combination obvious. Thus, it appears the examiner has not made a *prima facie* case of obviousness in this instance.

Moreover, the claimed ranges of between 2 and 10 mils or between 3 and 5 mils would be unworkable in accordance with the teachings of the references. Reiger identifies the structural weakness of conventional air-root-pruning containers as being problematic. See Reiger, col. 3, lines 11-20. Reiger teaches the liner 120 (asserted by the examiner as the fabric layer of a root-tip-trapping region) "is preferably heat bonded on one side to provide a smooth surface and *to provide stiffness to the liner 120* so that it will not slump in pot 125 but will stay substantially erect. The stiffness allows fabric liner 12 to hold its shape against inner surface 152 of pot 115, so that it will not collapse into pot 115 as it is filled with growing media." The pot 115 includes a sidewall 142, asserted by the examiner as the root-impenetrable layer of Reiger. If the sidewall 142 of the pot 115 were no more than 10 mils thick, the pot itself would be far too flimsy at a thickness of 10 mils or less to meet the stiffness objectives suggested by Reiger, particularly with Reiger's concern about weak pots. Thus, Reiger teaches away from the combination of the ranges of thickness recited in claims 32 and 33. The recited ranges of thickness would not be workable for the pot of Reiger, much less obvious.

**c. Claims 5, 6, 13, 65, 66, and 69 are patentable under 35 U.S.C. 103(a) over Reiger under 35 U.S.C. 103(a).**

**(1) Applicable Law**

Appellant re-asserts the statement of law provided above in Section b(1).

Furthermore, official notice without documentary evidence to support an examiner's conclusion is permissible only in some circumstances. While "official notice" may be relied on, these circumstances should be rare when an application is under final rejection or action under 37 CFR 1.113. Official notice unsupported by documentary evidence should only be taken by the

examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known. As noted by the court in *In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970), the notice of facts beyond the record which may be taken by the examiner must be “capable of such instant and unquestionable demonstration as to defy dispute” (*citing In re Knapp Monarch Co.*, 296 F.2d 230, 132 USPQ 6 (CCPA 1961)). It would not be appropriate for the examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known. For example, assertions of technical facts in the areas of esoteric technology or specific knowledge of the prior art must always be supported by citation to some reference work recognized as standard in the pertinent art. *In re Ahlert*, 424 F.2d at 1091, 165 USPQ at 420-21. See MPEP 2144.03.

Claims in dependent form shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim. 35 U.S.C. § 112, 4th paragraph; *See MPEP 608.01(n)*. Where the patentability of dependent claims is not argued separately from the independent claims from which they depend, the former stand or fall with the latter. *Scanner Technologies v. ICOS Vision Sys. Corp.*, 528 F.3d 1365, 1383 (Fed. Cir. 2008); *See In re Trans Texas Holdings Corp.*, 498 F.3d 1290, 1293 (Fed. Cir. 2007).

(2) Rejection of Claims 5, 6, 13, 65, 66, and 69

Claims 5, 6, 65, and 66

The examiner has provided no specific support in the prior art for the root tip-trapping region comprising between 1/2 and 9/10 of the sidewall (as set out in claims 5 and 65), or for the root-tip-trapping region comprising between 2/3 and 3/4 of the sidewall (as set out in claims 6 and 66).

The examiner attempts to compensate for this lack of specific support for the claimed ranges with the conjecture that the claimed range would be obvious, “depending on the type of plant being grown because different plants might need different air root pruning, thus, if a plant needs less air root pruning, then the sidewall would be made more of a root tip trapping region than air root pruning region.” *See Office Action dated October 7, 2009, page 8*. This assertion is properly regarded as official notice, as it is not capable of such instant and unquestionable

demonstration as to defy dispute. *See In re Ahlert*, 424 F.2d at 1091. Such official notice is not proper, particularly in the technology of the present subject matter, and further because the official notice was applied in a Final Office Action.

In the Response to Arguments section, the examiner defends this conjecture as “common sense articulated reasoning” per *KSR*. See Office Action dated October 7, 2009, pages 21-22. In *KSR*, the Supreme Court invoked the phrase “common sense” in discussing the rationale to combine known elements of prior art references, and not to supply missing elements not shown in the references. See *KSR*, 550 U.S. at 418 (“Although common sense directs one to look with care at a patent application that claims as innovation the combination of two known devices according to their established functions, it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does.”). Here, the examiner is attempting to supply elements (the claimed range) for which there is no specific support in the references. Accordingly, withdrawal of this rejection is respectfully requested.

**Claims 13 and 69**

Claims 13 and 69 depend from claims 1 and 65, and are allowable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested.

**d. Claims 8, 9, 11, 36, 38-40, 70-72 are patentable under 35 U.S.C. 103(a) over Reiger in view of U.S. Patent No. 4,939,865 (“Whitcomb I”).**

**(1) Applicable Law**

Appellant re-asserts the statement of law provided above in Section b(1).

**(2) Rejection of claims 8, 9, 11, 36, 38-40, and 71-72.**

Claims 8, 9, 11, 36, 38-40, 70-72 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger as applied to claim 1 above, and further in view of Whitcomb I.

### Claims 8, 9, 11, and 38

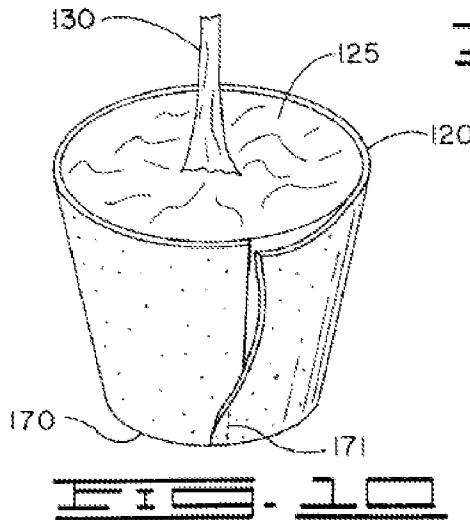
Claims 8, 9, 11 and 38 depend directly or indirectly from independent claim 1. These claims are believed to be patentable for at least the same reasons as claim 1, asserted above. Accordingly, withdrawal of this rejection is respectfully requested.

### Claim 9

The examiner asserts it would be obvious to combine Whitcomb's protuberances with Reiger's drain holes 146. The motivation, the examiner argues, is to direct the roots to the drain holes 146 for a quicker air pruning. However, there simply would be no reason to direct roots to the drain holes 146. The drain holes 146 taught by Reiger are presumably provided for draining water and not for air-root-pruning, regardless of whether the drain holes 146 provide some small amount of air pruning (which, as argued above, is likely negligible).

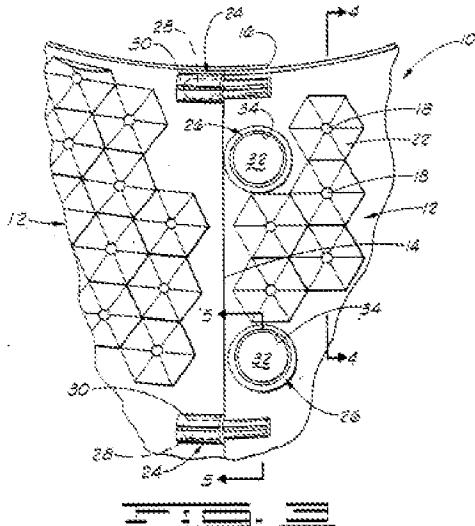
### Claim 11

Regarding claim 11, the examiner states that Reiger teaches a porous fabric layer or liner 120 of the sidewall being sewn together at its edges, as asserted to be shown in FIG. 10:



**Reiger, FIG. 10**

To show a layer of root impenetrable material being secured at its edges, the examiner cites to sheets bendable to form a container and hooked at the edges using tenons 28 and mortises 30, as taught in Whitcomb I:



**Whitcomb I, FIG. 3**

However, the combination of sewing together the edges of Reiger's fabric liner and hooking the edges of Whitcomb's sidewall would not result in a sidewall having both a root-tip-trapping region and an air-root-pruning region, much less wherein the root-tip-trapping region is a contiguous upper portion of the sidewall and the air-root-pruning region is a contiguous lower portion of the sidewall, in accordance with claim 1. Accordingly, withdrawal of this rejection is respectfully requested.

**Claim 36**

Further regarding claim 36, the rejection reasserts the examiner's comments regarding claim 69. Claims 36 and 69 are not of the same scope, because they depend from different independent claims. Thus, the examiner has failed to state a *prima facie* case of obviousness of claim 36. Accordingly, withdrawal of this rejection is respectfully requested.

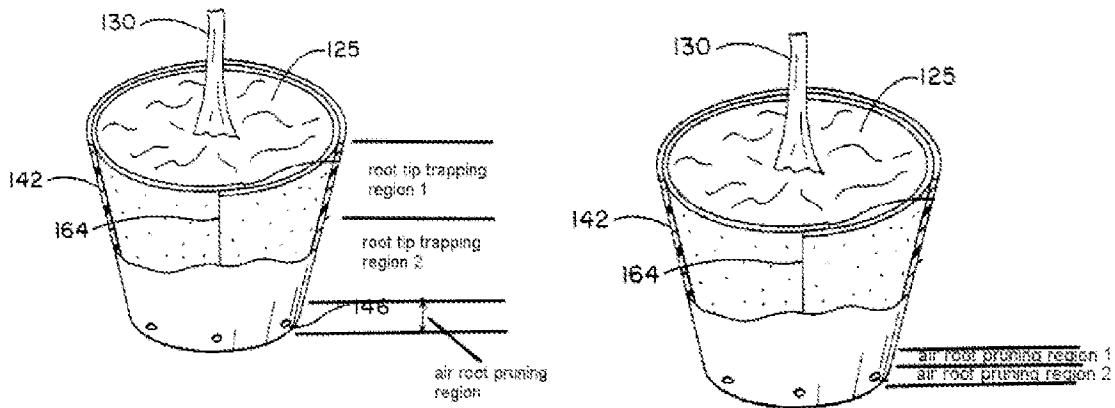
### Claim 70

Claim 70 recites, *inter alia*, “a porous air-root-pruning region.” The Board previously found that Reiger’s plastic sidewall inherently performs air-root-pruning because the fabric liner adjacent these drain holes is exposed to air. See BPAI Decision, page 8. While this point of finding was assumed, *arguendo*, above in discussing the patentability of other claims, Appellant respectfully requests reconsideration of this point of finding with respect to claim 70, for the following reasons.

Any air-root-pruning in the container of Reiger due to the several drain hole regions is going to be negligible, specifically because the drain holes 146 asserted by the Board to individually provide air-root-pruning are widely spaced and have a relatively small combined area. The vast majority of the roots will grow out and contact the generally curved sidewall of Reiger’s plant container between the widely-spaced drain holes 146. As the roots contact the curved sidewall, one skilled in the art would expect the roots to be deflected in a direction tangent to the sidewall, causing most of the roots to grow past (rather than through) the drain holes. Thus, no appreciable air-root pruning will result from the drain holes 146, and the benefit of air-root-pruning, such as preventing spiral root growth and maximizing the development of lateral roots, will be virtually non-existent. Thus, within the broadest *reasonable* interpretation in view of Appellant’s specification, Reiger does not teach a porous air-root-pruning region. Therefore, claim 70 should be patentable over the asserted combination of Reiger and Whitcomb I. Claims 71 and 72 depend from claim 70 and are patentable for at least the same reasons. Accordingly, withdrawal of this rejection is respectfully requested regarding claims 70-72.

### Claims 39 and 40

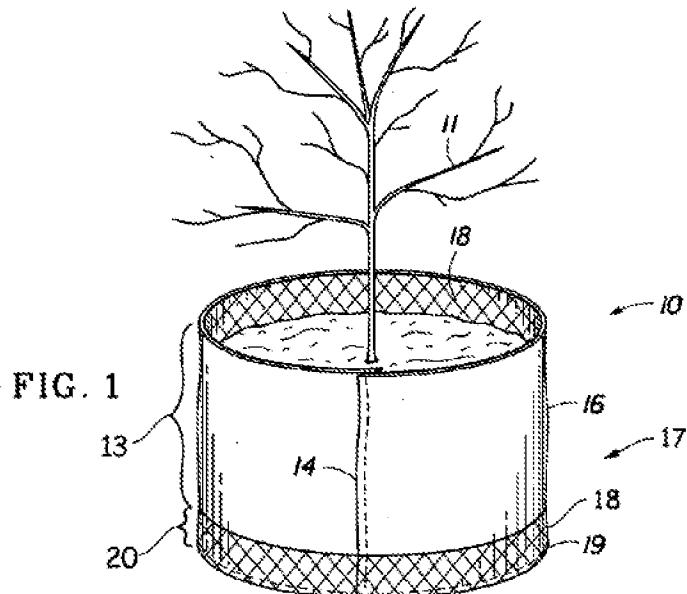
Claims 39 and 40 depend from claim 70. Claim 39 recites two or more root-tip-trapping regions, and claim 40 recites two or more air-root-pruning regions. The examiner explains that “there is no boundary defined in Appellant’s invention regarding regions,” and annotates FIG. 8 of Reiger to arbitrarily define “regions” (duplicated here for convenience):



### Examiner's Annotations to Reiger, FIG. 8.

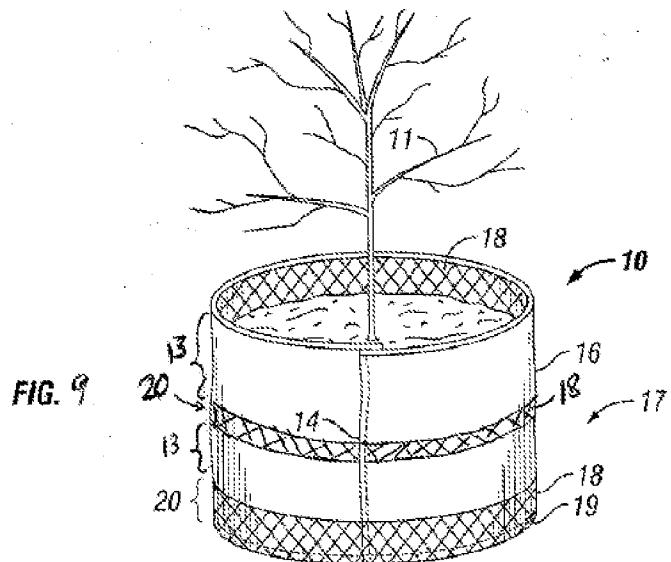
See Office Action dated October 7, 2009, pages 11 – 13.

The examiner's assertion that two regions can be found where there is no boundary setting apart the regions is inconsistent with the present specification as well as the ordinary meaning of a region. Contrary to the examiner's assertion, FIG. 1 of the present application clearly shows the boundary between two regions, which in this example are a root-tip-trapping region 13 and an air-root-pruning-region 20:



### Application 10/770,352, FIG. 1

(See Specification, Figure 1 and para. [0038]). FIG. 9, presented in Appellant's Response to the Office Action dated March 17, 2009, also clearly shows separate root-tip-trapping regions 13 and separate air-root-pruning regions 20:



## Present Application (10/770,352), FIG. 9

This drawing, filed on June 17, 2009, was accepted by the examiner in the Office Action dated October 7, 2009 (see Office Action Summary).

By contrast, what the examiner has done in the annotated Reiger figure is to arbitrarily describe a single region as having two regions. The examiner has not shown that Reiger teaches or suggests two or more root-tip-trapping regions per claim 39 and two or more air-root-pruning regions per claim 40, within the broadest *reasonable* interpretation consistent with the specification. Accordingly, withdrawal of this rejection is respectfully requested.

e. **Claim 10 is patentable under 35 U.S.C. 103(a) over Reiger in view of U.S. Patent No. 4,716,680 (“Whitcomb II”)**

(1) Applicable Law

Appellant re-asserts the statement of law provided above in Section b(1).

(2) Rejection of claim 10

Claim 10 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger as applied to claim 1 above, and further in view of Whitcomb II. Claim 10 depends from claim 1 and is patentable for at least the same reasons as claim 1.

Furthermore, the teachings of each reference, taken separately, is already purported to achieve the function of trapping roots, for the benefit of preventing spiral root growth and maximizing the development of lateral roots. The examiner has not cited any reason, nor shown, by a preponderance of evidence, that one skilled in the art would combine the recited structure of Reiger and Whitcomb I, when the recited structure of each of these references, taken separately, is already purported to provide root-tip-trapping. Accordingly, withdrawal of this rejection is respectfully requested.

**f. Claim 21 is patentable under 35 U.S.C. 103(a) over Reiger and Reynolds in view of U.S. Patent No. 5,311,700 (“Thomas”)**

(1) Applicable Law

Appellant re-asserts the statement of law provided above in Section b(1).

(2) Rejection of claim 21

Claim 21 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger as modified by Reynolds as applied to claims 1 and 3 above, and further in view of Thomas. Claim 21 indirectly depends from claim 1 and is patentable for at least the same reasons as claims 1 and 3. Accordingly, withdrawal of this rejection is respectfully requested.

**g. Claims 22-24 are patentable over Reiger and Reynolds in view of GB 2,073,567 (“Berlit”)**

(1) Applicable Law

Appellant re-asserts the statement of law provided above in Section b(1).

(2) Rejection of claims 22-24

Claims 22-24 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger as modified by Reynolds as applied to claims 1 and 3 above, and further in view of Berlit. Claims 22-24 indirectly depend from claim 1 and are patentable for at least the same reasons as claims 1 and 3. Accordingly, withdrawal of this rejection is respectfully requested.

**h. Claims 25, 29, and 31 are patentable under 35 U.S.C. 103(a) over Reiger and Reynolds in view of Van der Goorbergh**

(1) Applicable Law

Appellant re-asserts the statement of law provided above in Section b(1).

(2) Rejection of claims 25, 29, and 31

Claims 25, 29 and 31 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger as modified by Reynolds, as applied to claims 1 and 3 above, and further in view of Van der Goorbergh. Claims 25, 29 and 31 indirectly depend from claim 1 and are patentable for at least the same reasons as claims 1 and 3. Accordingly, withdrawal of this rejection is respectfully requested.

**i. Claims 28, 34, and 35 are patentable under 35 U.S.C. 103(a) over Reiger and Reynolds in view of U.S. Patent No. 5,852,896 (“Flasch”)**

(1) Applicable Law

Appellant re-asserts the statement of law provided above in Section b(1).

(2) Rejection of claims 28, 34, and 35.

Claims 28, 34 and 35 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger as modified by Reynolds, as applied to claims 1 and 3 above, and further in view of Flasch. Claims 28, 34 and 35 indirectly depend from claim 1 and are patentable for at least the same reasons as claims 1 and 3. Accordingly, withdrawal of this rejection is respectfully requested.

**j. Claim 30 is patentable under 35 U.S.C. 103(a) over Reiger, Reynolds, and Berlit in view of Flasch**

(1) Applicable Law

Appellant re-asserts the statement of law provided above in Section b(1).

(2) Rejection of claim 30

Claim 30 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger as modified by Reynolds and Berlit, as applied to claims 1, 3, and 22 above, and further in view of Flasch. Claim 30 indirectly depends from claim 1 and is patentable for at least the same reasons as claims 1 and 3. Accordingly, withdrawal of this rejection is respectfully requested.

**k. Claims 73-74 are patentable under 35 U.S.C. 103(a) over Reiger and Whitcomb I in view of Reynolds**

(1) Applicable Law

Appellant re-asserts the statement of law provided above in Section b(1).

(2) Rejection of claims 73 and 74

Claims 73-74 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Reiger as modified by Whitcomb as applied to claim 70 above, and further in view of Reynolds. Claims 73-74 directly or indirectly depend from claim 70 and are patentable for at least the same reasons as claim 70. Additionally, claim 73 is patentable for the reasons argued under separate subheading below. Accordingly, withdrawal of this rejection is respectfully requested.

Claim 73

Claim 73 recites that the root-tip-trapping region comprises a porous fabric layer bonded to a layer of root-impenetrable material. With regard to one embodiment, the specification teaches, “the root-tip-trapping region is preferably formed by two layers bonded to one another to form a bilayer material. The bilayer material includes a root-tip-trapping layer that prevents the root tips from circling and a layer consisting of a root-impenetrable material formed onto a

surface of the root-tip-trapping layer to prevent further advancement of the root tips.” See ¶ 9. The specification discusses that, in an alternative embodiment, it may be possible to stretch-wrap or shrink-wrap a root-impenetrable layer to the fabric layer. However, “since the wrapped outer layer is not bonded to the fabric layer, it is preferable for the wrap to have sufficient strength to minimize the number of roots that would either penetrate the wrap or squeeze between the fabric layer and the wrap layer and begin to circle.” See ¶ 29.

Reiger teaches “placing a fabric liner snugly inside an impermeable pot.” See, e.g., Reiger, col. 9, lines 26-34. The examiner argues that “snugly” fits the definition of bonding. See Office Action dated October 7, 2009. However, the specification clearly distinguishes between bonding the two layers and merely placing the two layers under tension, in that merely placing the two layers under tension may still allow some root circling between layers. Thus, within the broadest *reasonable* interpretation of Appellant’s Specification, Reiger does *not* teach a porous fabric layer *bonded* to a layer of root-impenetrable material.

The examiner asserts, in the alternative, that Reynolds’ sidewall includes a root-tip-trapping region comprising a porous fabric layer bonded to a layer of root-impenetrable material. The Board previously found that Reynolds’ teaches bonding of two layers generally. See BPAI Decision, page 6 (with reference to original claim 46: A sidewall for a plant container, comprising: a water permeable, porous fabric layer and a water impermeable, root-impenetrable layer bonded to a portion of the outer face of the fabric layer.) However, the Board further found that Reynolds expressly teaches that roots grow into the interface between the sheet and pot and, therefore, that the polymer sheet and fibrous pot sidewall of Reynolds’ does not constitute a root-tip-trapping region. See BPAI Decision, page 5. Thus, Reynolds expressly teaches away from the claim 73 limitation of a root-tip-trapping region comprising a porous fabric layer bonded to a layer of root-impenetrable material.

Claim 73 is patentable over Reiger and Reynolds for these reasons, in addition to the reason that claim 73 depends from a patentable claim 70 as argued above. Accordingly, withdrawal of this rejection is respectfully requested.

## **Conclusion**

For the reasons set forth above, Appellant requests that the Board withdraw the rejections and allow claims 1-3, 5-40, 46-50, and 63-74.

Respectfully submitted,

/Jeffrey L. Streets, #37,453/

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(8) CLAIMS APPENDIX

1. A sidewall for a plant container, comprising:
  - a substantially water-impermeable root-tip-trapping region; and
  - a porous air-root-pruning region adjacent the root-tip-trapping region, wherein the root-tip-trapping region is a contiguous upper portion of the sidewall and the air-root-pruning region is a contiguous lower portion of the sidewall.
2. The sidewall of claim 1, wherein the root-tip-trapping region is colinear with the air-root-pruning region.
3. The sidewall of claim 1, wherein the root-tip-trapping region comprises a porous fabric layer bonded to a layer of a root-impenetrable material.
5. The sidewall of claim 1, wherein the root-tip-trapping region comprises between 1/2 and 9/10 of the sidewall.
6. The sidewall of claim 1, wherein the root-tip-trapping region comprises between 2/3 and 3/4 of the sidewall.
7. The sidewall of claim 1, wherein the sidewall is flexible, rigid, or a combination thereof.
8. The sidewall of claim 1, wherein the root-tip-trapping and air-root-pruning regions form a bendable sheet.
9. The sidewall of claim 1, wherein the air-root-pruning region includes protuberances having outwardly extending distal ends that are open.
10. The sidewall of claim 1, wherein the root-tip-trapping region includes protuberances having outwardly extending distal ends that are closed to trap roots.

11. The sidewall of claim 1, wherein the sidewall has an edge that is secured by a method selected from sewing, gluing, plastic welding, hooking, riveting, screwing, bolting, bonding, and combinations thereof.
12. The sidewall of claim 3, wherein the root-impenetrable material is water-impermeable.
13. The sidewall of claim 1, wherein the root-tip-trapping region comprises greater than 10 root-tip-trapping elements per square inch.
14. The sidewall of claim 3, wherein the porous fabric has a weight between 2 and 10 ounces per square yard.
15. The sidewall of claim 3, wherein the porous fabric has a weight between 4 and 6 ounces per square yard.
16. The sidewall of claim 3, wherein the porous fabric has openings between 1/16 and 1/4 inch.
17. The sidewall of claim 3, wherein the porous fabric is a spun bonded, needle punched fabric.
18. The sidewall of claim 3, wherein the porous fabric is selected from polyester, polypropylene or other olefin fiber.
19. The sidewall of claim 3, wherein the porous fabric is a woven or knitted fabric.
20. The sidewall of claim 3, wherein the porous fabric is degradable.
21. The sidewall of claim 3, wherein the porous fabric is cotton.

22. The sidewall of claim 3, wherein the porous fabric is opaque.
23. The sidewall of claim 22, wherein the porous fabric is black or gray.
24. The sidewall of claim 3, wherein the porous fabric is bonded onto the root-impenetrable material by a method selected from gluing, laminating and combinations thereof.
25. The sidewall of claim 3, wherein the root-impenetrable material is reflective.
26. The sidewall of claim 3, wherein the root-impenetrable material is a polymer sheet.
27. The sidewall of claim 3, wherein the root-impenetrable material is selected from polyethylene and polypropylene.
28. The sidewall of claim 3, wherein the root-impenetrable material is metal.
29. The sidewall of claim 3, wherein the root-impenetrable material is a metal foil.
30. The sidewall of claim 22, wherein the root-impenetrable layer is pervious to UV radiation.
31. The sidewall of claim 3, wherein the root-impenetrable material is white.
32. The sidewall of claim 3, wherein the root-impenetrable layer has a thickness between 2 and 10 mils.
33. The sidewall of claim 3, wherein the root-impenetrable layer has a thickness between 3 and 5 mils.
34. The sidewall of claim 3, wherein the root-impenetrable material is biodegradable.

35. The sidewall of claim 34, wherein the biodegradable material is selected from wood, fiber, starch, polyhydroxyalkanoates, polycaprolactone, polylactide aliphatic copolymer, polylactide, aliphatic polyester, an aliphatic-aromatic copolymer, and combinations thereof.

36. The sidewall of claim 70, wherein the regions are configured in a pattern selected from rows, columns, dots, checkerboard, and combinations thereof.

37. The sidewall of claim 1, wherein the sidewall is an integral part of a container.

38. The sidewall of claim 1, wherein the sidewall is a discrete panel that can form a container.

39. The sidewall of claim 70, wherein there are two or more root-tip-trapping regions.

40. The sidewall of claim 70, wherein there are two or more air-root-pruning regions.

46. The sidewall of claim 12, wherein the porous fabric layer of the root-tip-trapping region extends beyond the layer of root-impenetrable material to form the porous air-root-pruning region.

47. The apparatus of claim 46, wherein the porous fabric is a spun bonded, needle punched fabric.

48. The apparatus of claim 47, wherein the fabric has a density between 2 and 10 ounces per square yard.

49. The apparatus of claim 46, wherein the root-impenetrable layer comprises polyethylene and the porous fabric comprises spun bonded fabric.

50. The apparatus of claim 49, wherein the polyethylene has a thickness between 2 and 10 mils.

63. The sidewall of claim 3, wherein the porous fabric layer of the root-tip-trapping region extends beyond the layer of a root-impenetrable material to form the air-root-pruning region.

64. The sidewall of claim 46, wherein the layer of root-impenetrable material is disposed over 1/2 to 9/10 of the porous fabric layer.

65. A sidewall for a plant container, comprising:

a substantially water-impermeable root-tip-trapping region; and

a porous air-root-pruning region adjacent the root-tip-trapping region, wherein the root-tip-trapping region comprises between 1/2 and 9/10 of the sidewall.

66. The sidewall of claim 65, wherein the root-tip-trapping region comprises between 2/3 and 3/4 of the sidewall.

67. The sidewall of claim 65, wherein the root-tip-trapping region comprises a porous fabric layer bonded to a layer of a root-impenetrable material.

68. The sidewall of claim 67, wherein the porous fabric layer of the root-tip-trapping region extends beyond the layer of root-impenetrable material to form the porous air-root-pruning region.

69. The sidewall of claim 65, wherein the regions are configured in a pattern selected from rows, columns, dots, checkerboard, and combinations thereof.

70. A sidewall for a plant container, comprising:

a substantially water-impermeable root-tip-trapping region; and

a porous air-root-pruning region adjacent the root-tip-trapping region, wherein the root-tip-trapping and air-root-pruning regions form a bendable sheet.

71. The sidewall of claim 70, wherein the root-tip-trapping region comprises between 1/2 and 9/10 of the sidewall.

72. The sidewall of claim 70, wherein the root-tip-trapping region comprises between 2/3 and 3/4 of the sidewall.

73. The sidewall of claim 70, wherein the root-tip-trapping region comprises a porous fabric layer bonded to a layer of a root-impenetrable material.

74. The sidewall of claim 73, wherein the porous fabric layer of the root-tip-trapping region extends beyond the layer of root-impenetrable material to form the porous air-root-pruning region.

(9) EVIDENCE APPENDIX

NONE

(10) RELATED PROCEEDINGS APPENDIX

A copy of the Decision on Appeal for Application No. 10/770,352, in Appeal 2008-2136, as decided on June 13, 2008, is provided below.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* CARL E. WHITCOMB

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Appeal 2008-2136  
Application 10/770,352  
Technology Center 3600

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Decided: June 13, 2008

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Before BRADLEY R. GARRIS, THOMAS A. WALTZ, and  
CATHERINE Q. TIMM, *Administrative Patent Judges*.

GARRIS, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 1-40 and 46-50. We have jurisdiction under 35 U.S.C. § 6.

We AFFIRM-IN-PART and make a NEW GROUND OF REJECTION.

Appellant claims a sidewall 17 for a plant container 10 comprising a substantially water-impermeable root-tip-trapping region 13 and a porous air-root-pruning region 20 adjacent the root-tip-trapping region (claim 1; figs. 1, 2, 6). Appellant also claims a sidewall 17 for a plant container 10 comprising a water permeable, porous fabric layer 18 and a water impermeable, root-impenetrable layer 16 bonded to a portion of the outer face of the fabric layer (claim 46; fig. 2).

Representative independent claims 1 and 46 read as follows:

1. A sidewall for a plant container, comprising:

a substantially water-impermeable root-tip-trapping region; and  
a porous air-root-pruning region adjacent the root-tip-trapping region.

46. A sidewall for a plant container, comprising:

a water permeable, porous fabric layer and a water impermeable, root-impenetrable layer bonded to a portion of the outer face of the fabric layer.

The prior art set forth below is relied upon by the Examiner as evidence of unpatentability:

Reynolds	3,080,680	Mar. 12, 1963
Thomas	5,311,700	May 17, 1994
Flasch, Jr.	5,852,896	Dec. 29, 1998
Reiger	6,202,348 B1	Mar. 20, 2001
Lai	6,505,440 B1	Jan. 14, 2003
Berlit	GB 2,073,567 A	Oct. 21, 1981
Van der Goorbergh	EP 0 300 578	Jan. 15, 1989

The following rejections are before us in this appeal.<sup>1</sup>

Claims 1-4, 7, 11, 12, 20, 26, 27, 37-40, and 46 are rejected under 35 U.S.C. § 102(b) as being unpatentable over Reynolds.

Under 35 U.S.C. § 103(a):

claims 5, 6, 8, 9, 14-16, 24, 32, 33, and 36 are rejected as being unpatentable over Reynolds;

claims 10, 13, 17-19, and 47-50 are rejected as being unpatentable over Reynolds in view of Reiger;

claim 21 is rejected as being unpatentable over Reynolds in view of Thomas;

claims 22 and 23 are rejected as being unpatentable over Reynolds in view of Berlit;

claims 25, 29, and 31 are rejected as being unpatentable over Reynolds in view of Van der Goorbergh;

claims 28, 34, and 35 are rejected as being unpatentable over Reynolds in view of Flasch; and

claim 30 is rejected as being unpatentable over Reynolds in view of Berlit and further in view of Flasch.

#### *OPINION*

For the reasons expressed below, we reverse the rejections of claims 1-40 and affirm the rejections of claims 46-50.

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<sup>1</sup> The new ground of rejection under the first paragraph of 35 U.S.C. § 112 made by the Examiner in the Answer has been withdrawn in the communication mailed October 30, 2007.

*The rejections of claims 1-40*

Concerning the § 102 rejection of independent claim 1, the Examiner considers the fibrous walls of pot 18 in combination with the polymer sheet 60, 62 of Reynolds to satisfy the claimed root-tip-trapping region and the perforated bottom of sheet 60, 61 to satisfy the claimed porous air-root-pruning region (Final Office Action 2). The Examiner acknowledges that Reynolds teaches roots will grow through pot 18 and into the space between the pot and the polymer sheet 60, 62 (Ans. 5-6) but finds that "the space between sheet 60 and pot 18 is a root tip trapping region because the roots cannot escape through the sheet 60 since it is root impenetrable as taught by Reynolds" (Ans. 6). The Examiner also acknowledges that it is the perforated bottom of Reynolds' container which is considered to satisfy the air-root-pruning region of the claimed sidewall but finds that the bottom of a pot would be regarded in this art as a bottom sidewall (Ans. 6).

Appellant argues that, when properly construed, claim 1 is not anticipated by Reynolds (App. Br. 6-11, Reply Br. 8). Specifically, Appellant argues that the "root-tip-trapping" function of claim 1 "means that the tip of a root becomes trapped and cannot grow or extend any further" (App. Br. 6). Because roots indisputably continue growing in the interface between the polymer sheet and pot of Reynolds, it is Appellant's contention that "Reynolds does not disclose any structure that possesses the claimed characteristic of a root-tip-trapping region" (App. Br. 9). Appellant also argues that the Specification consistently distinguishes between the claimed "sidewall" and a "bottom" of a plant container (App. Br. 7) and accordingly that Reynolds' perforated bottom does not satisfy the claim 1 requirement for

a sidewall comprising an air-root-pruning region (App. Br. 8-9). These arguments are persuasive.

As correctly pointed out by Appellant (App. Br. 4-5), during examination, claims should be given their broadest reasonable interpretation consistent with the Specification. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004). When so construed, the claim 1 requirements for a "root-tip-trapping region" and an "air-root-pruning region" are not satisfied by Reynolds.

As indicated above, the Examiner interprets the claim 1 "root-tip-trapping region" as encompassing the polymer sheet and fibrous pot sidewall of Reynolds even though patentee expressly teaches that roots grow into the interface between the sheet and pot (Ans. 5-6). However, this interpretation is inconsistent with Appellant's Specification which teaches that the root-tip-trapping region traps the root tip so as to stop further root extension and thereby prevent the root tips from growing and circling the container perimeter in the manner disclosed by Reynolds (Spec. paras. [0009], [0029]). Also inconsistent with Appellant's Specification is the Examiner's interpretation of the sidewall air-root-pruning region required by claim 1 as encompassing the perforated bottom of Reynolds' container. Furthermore, as convincingly argued by Appellant (Reply Br. 8), this inconsistency is not somehow negated, as the Examiner believes (Ans. 6), simply because a pot bottom has been referred to in the prior art as a bottom sidewall.

In light of the foregoing, we reverse the Examiner's § 102 rejection of independent claim 1 and of claims 2-4, 7, 11, 12, 20, 26, 27, and 37-40 as being anticipated by Reynolds. The remaining claims which depend from

claim 1 are rejected under § 103 based on modifications proposed by the Examiner which do not cure the above discussed deficiencies of Reynolds. Therefore, we also reverse the § 103 rejections of these remaining dependent claims based on Reynolds alone or further in view of the Reiger, Thomas, Berlit, Van der Goorbergh, and Flasch references.

In summary, we have reversed the Examiner's rejections of claims 1-40.

*The rejections of claims 46-50*

Independent claim 46 is rejected under § 102(b) as being anticipated by Reynolds. In the sections of the Appeal and Reply Briefs which present arguments against the Examiner's § 102 rejection, Appellant does not specifically identify and address claim 46. Nevertheless, it appears that Appellant believes that Reynolds' porous fabric layer (i.e., pot 18) and root-impenetrable layer (i.e., polymer sheet 60, 62) are not bonded to one another as required by claim 46 (App. Br. 16, Reply Br. 7). Such a belief is not well taken.

Reynolds expressly teaches that the polymer sheet (or plastic film) may be applied in liquid form and cured (col. 2, ll. 47-52) and that the sidewall portions 62 of the polymer sheet are adherent to the sidewalls 16 of the pot (col. 6, ll. 3-6). These teachings reasonably support the determination that patentee's pot (i.e., the claimed porous fabric layer) and polymer sheet (i.e., the claimed root-impenetrable layer) are bonded together as required by the claim under review.

For this reason, we sustain the § 102 rejection of claim 46 as being anticipated by Reynolds.

Concerning the § 103 rejection of claims 47-50 (which depend from claim 46) as being unpatentable over Reynolds in view of Reiger, Appellant presents no argument which specifically identifies these claims. Instead, the rejection based on Reynolds in view of Reiger is generally asserted to be improper because "Appellant finds no ... motivation or suggestion to combine these references" (App. Br. 16). However, the Examiner has proffered multiple reasons why an artisan would have combined these references in such a manner as to satisfy the requirements of the claims under review (Final Office Action 6-7). Because Appellant has failed to identify any error in the Examiner's proffered reasoning, we are unpersuaded by the general assertion that no motivation or suggestion exists for combining Reynolds and Reiger.

It follows that we also sustain the Examiner's § 103 rejection of claims 47-50 as being unpatentable over Reynolds in view of Reiger.

#### *THE NEW GROUND OF REJECTION*

Our foregoing review of the Examiner's rejections has led us to determine that claim 1 is unpatentable over the applied prior art reference to Reiger. Therefore, we make the following new ground of rejection of claim 1 pursuant to our authority under 37 C.F.R. § 41.50(b).<sup>2</sup>

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<sup>2</sup> We emphasize that our patentability analysis for this new ground of rejection based on Reiger is limited to independent claim 1 only. We have not analyzed whether any of the claims which depend from claim 1 are unpatentable based on Reiger alone or further in view of additional prior art.

Claim 1 is rejected under 35 U.S.C. § 102(a) as being anticipated by Reiger.

Reiger discloses a plant container comprising a plastic pot 115 having a sidewall 142 including a fabric liner 120 which traps root tips 184 in such a way as to stop the apical growth of roots and to prevent root circling (Figs. 8, 9, 12; col. 7, ll. 42-62, col. 8, ll. 28-49).

Patentee's plastic sidewall 142 and fabric liner 120 define a region which is water-impermeable and which performs a root-tip-trapping function. It follows that Reiger's plastic sidewall and fabric liner combination fully satisfies the claim 1 requirement for "a substantially water-impermeable root-tip-trapping region."

Reiger's plastic sidewall 142 also includes a plurality of drain holes 146 (Fig. 8; col. 7, ll. 52-54). Because the fabric liner 120 adjacent these drain holes is exposed to air, we determine that this adjacent fabric liner inherently performs the air-root-pruning function recited in claim 1. *See In re Cruciferous Spout Litig.*, 301 F.3d 1343, 1349 (Fed. Cir. 2002) (A prior art reference may anticipate when the claim limitations not expressly found in the reference are nonetheless inherent in it).

Our determination is reasonable since Reiger expressly teaches that root tips are capable of penetrating the fabric liner and thereupon stop growing when directed into the sidewall 142 of pot 115 (col. 8, ll. 38-48). Because no sidewall 142 exists at the regions defined by drain holes 146, the afore-noted roots which penetrate the fabric liner in those drain hole regions would be necessarily exposed to air and pruned thereby in the same way as roots are air pruned in Appellant's claimed air-root-pruning region. *See Ex*

*parte Levy*, 17 USPQ2d 1461, 1463-64 (BPAI 1990) (inherency must be reasonably supported by a basis in fact and/or technical reasoning).

Under these circumstances, Reiger's fabric liner regions adjacent drain holes 146 satisfy the claim 1 requirement for "a porous air-root-pruning region adjacent the root-tip-trapping region."

#### *CONCLUSION*

We have reversed the Examiner's rejections of claims 1-40.

We have affirmed the Examiner's rejections of claims 46-50.

We have made a new ground of rejection against claim 1.

In addition to affirming the Examiner's rejection(s) of one or more claims, this opinion contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). 37 C.F.R. § 41.50(b) provides "[a] new ground of rejection pursuant to this paragraph shall not be considered final for judicial review."

37 C.F.R. § 41.50(b) also provides that the Appellant, *WITHIN TWO MONTHS FROM THE DATE OF THE DECISION*, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution*. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the proceeding will be remanded to the examiner. . . .

(2) *Request rehearing*. Request that the proceeding be reheard under § 41.52 by the Board upon the same record. . . .

Should the Appellant elect to prosecute further before the Examiner pursuant to 37 C.F.R. § 41.50(b)(1), in order to preserve the right to seek review under 35 U.S.C. §§ 141 or 145 with respect to the affirmed rejection, the effective date of the affirmance is deferred until conclusion of the prosecution before the Examiner unless, as a mere incident to the limited prosecution, the affirmed rejection is overcome.

If the Appellant elects prosecution before the Examiner and this does not result in allowance of the application, abandonment or a second appeal, this case should be returned to the Board of Patent Appeals and Interferences for final action on the affirmed rejection, including any timely request for rehearing thereof.

The decision of the Examiner is affirmed-in-part.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

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